



**Calday Grange**  
Grammar School

# Year 12 Pre-Course Material

Faculty	Communication & Creative ▾
Subject	Product Design ▾
Entry year	2023 ▾

# Welcome

## Creative Faculty: Design & Technology

Welcome to the Design & Technology department.

On these pages you will find:

- background reading suggestions
- details of a pre-course task we would like you to complete before the course starts
- details of subject knowledge enhancement task

We hope you will find this a useful introduction to the course and it gives you the opportunity to gain an insight into this A Level subject.

We look forward to meeting you in September.

### **Department Staff:**

Mr G Roscoe (Curriculum Lead)

Mrs C Mottram (Teacher of Design & Technology)

Mr J Miller (Teacher of Design & Technology)

Mrs C Sington (Teacher of Design & Technology)

Mrs E Jooste (Teacher of Design & Technology)

Mr K Heath (Design & Technology Technician)



## Pre course material for A Level Design & Technology - Product Design

*"Our curriculum aims to encourage problem solving skills and a lifelong passion for design. We aim to do this by sowing the seed for critical and creative thinking through embedding a love of designing, making, and providing the opportunity for reflective practice."*

Design & Technology is key to developing 21st Century skills such as critical and creative thinkers by allowing students to evaluate and understand how everything around them is designed and made. At Calday Grange Grammar School students are given the opportunity to make their own choices, problem solve and build up a resilience within their own working practice, enabling them to become reflective thinkers.

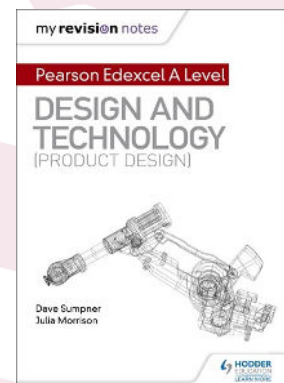
### Pre course information:

Students wishing to study the subject at A Level should familiarise themselves with the Edexcel website:

<https://qualifications.pearson.com/content/demo/en/qualifications/edexcel-a-levels/design-technology-product-design-2017.html>

Students should equip themselves with appropriate materials for the course, as a guide these consist of:

- Set of drawing pencils
- Set of water colour pencils
- Assorted coloured twin nib coloured marker pens
- Variety of black liner pens, e.g. fine liner, broad liner
- Folder to keep all theory work organised
- Lined pad
- A4 and A3 plain pad
- Maths set
- A school apron, ordered via the school shop



Textbooks will be used during lessons, however one beneficial book to purchase can be found here:

<https://www.hoddereducation.co.uk/subjects/art-design-technology/products/16-18/my-revision-notes-pearson-edexcel-a-level-design> (My Revision Notes: Pearson Edexcel A Level Design and Technology, ISBN 9781510474154 or ebook: ISBN 9781398315112)

### Year 12 preparation

There are 3 main focused projects in your first year that will help develop your skills. These include:



- 'Visual Skills Unit' to develop designing skills.
- 'Manufacturing Unit' focusing on design and development skills.
- 'Creative Design Unit' using lamination to develop making skills.



## Edexcel Design & Technology - Product Design (9DT0)

Unit number and title	Assessment information
<p>Component 1: Principles of Design and Technology</p> <p>Paper code (9TD0 / 01)</p> <p>Written examination</p> <p>50% of overall qualification</p> <p>120 marks</p>	<p>The unit is assessed through a 2 hour 30 minute examination paper set and marked by Edexcel in the Year 13.</p> <p>The paper will be a question and answer booklet and all questions in the paper are compulsory.</p> <p>The paper will consist of short-answer and extended-writing type questions and will be based on the following topic areas:</p> <ul style="list-style-type: none"> <li>• Topic 1: Materials</li> <li>• Topic 2: Performance characteristics of materials</li> <li>• Topic 3: Processes and techniques</li> <li>• Topic 4: Digital technologies</li> <li>• Topic 5: Factors influencing the development of products</li> <li>• Topic 6: Effects of technological developments</li> <li>• Topic 7: Potential hazards and risk assessment</li> <li>• Topic 8: Features of manufacturing industries</li> <li>• Topic 9: Designing for maintenance and the cleaner environment</li> <li>• Topic 10: Current legislation</li> <li>• Topic 11: Information handling, Modelling and forward planning</li> <li>• Topic 12: Further processes and techniques.</li> </ul>
<p>Component 2: Independent Design and Make Project</p> <p>Paper code: (9DT0 / 02)</p> <p>Non-examined assessment</p> <p>50% of overall qualification</p> <p>120 marks</p>	<p>This unit is internally set and marked by the centre and externally moderated by Edexcel.</p> <p>Students will produce a substantial design, make and evaluate project which consists of a portfolio and a prototype.</p> <p>The portfolio will contain approximately 40 sides of A3 paper (or electronic equivalent) There are four parts to the assessment:</p> <p><b>Part 1: Identifying and outlining possibilities for design</b> Identification and investigation of a design possibility, investigation of client/end user needs, wants and values, research and production of a specification</p> <p><b>Part 2: Designing a prototype</b> Design ideas, development of design idea, final design solution, review of development and final design and communication of design ideas</p> <p><b>Part 3: Making a final prototype</b> Design, manufacture and realisation of a final prototype, including tools and equipment and quality and accuracy</p> <p><b>Part 4: Evaluating own design and prototype</b> Testing and evaluation</p>